

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method of folding a denatured polypeptide, comprising the steps of:
 - (a) providing a polypeptide in an unfolded state which is capable of binding to a chaperonin;
 - (b) binding said polypeptide to said chaperonin to form a chaperonin-polypeptide complex for the folding of said polypeptide to its biologically active state; and
 - (c) adding an osmolyte to ~~exposing~~ said chaperonin-polypeptide complex ~~to an osmolyte~~, thereby promoting the folding of said polypeptide from its unfolded state to its folded state to yield a folded biologically active polypeptide whereby said promoting is greater than that which is achieved using chaperonins and osmolytes alone.
2. (Original) The method of folding a denatured polypeptide of claim 1 wherein said chaperonin is of the Escherichia coli GroE chaperonin family.
3. (Original) The method of folding polypeptides of claim 2 in which the chaperonin is E. coli GroEL.
- 4.-9. (withdrawn)
10. (Original) The method of folding polypeptides of claim 1 in which the osmolyte is urea.
11. (Withdrawn) The method of folding polypeptides of claim 1 in which the osmolyte is sarcosine.
12. (Original) The method of folding polypeptides of claim 1 further comprising the step of promoting the folding of said polypeptide by the addition of a co-chaperonin to the chaperonin-polypeptide complex.

13. (Original) The method of folding polypeptides of claim 1 further comprising a step of removing a metastable polypeptide folding intermediate prior to complete folding of the polypeptide and further stabilizing said metastable polypeptide.
14. (Original) The method of folding polypeptides of claim 1 wherein said chaperonin is immobilized on an inert support.
15. (previously presented) The method of folding polypeptides of claim 1 wherein the concentration of said osmolyte is sufficient to reduce the aggregation of unfolded polypeptides into unusable forms.
16. (previously presented) The method of folding polypeptides of claim 1 wherein said polypeptide is substantially incapable of being folded to its biologically active form by either a chaperonin or an osmolyte alone.
17. (Original) The method of folding a denatured polypeptide of claim 1 wherein said method is conducted under controlled oxidation/reduction conditions.
18. (Original) The method of folding a denatured polypeptide of claim 17 in which the oxidation/reduction conditions comprise an at least substantially anaerobic environment.
19. (Original) The method of folding a polypeptide of claim 17 wherein said oxidation/reduction conditions are controlled by one or more redox agents selected from the group comprising glutathione, sulfhydryl, and protein reduction systems.
- 20.-39. (withdrawn)
40. (currently amended) A method of folding a denatured polypeptide, comprising the steps of:
 - (a) providing a polypeptide in an unfolded state that is capable of binding to an oligomeric chaperonin;

(b) binding said polypeptide to said chaperonin to form a chaperonin-polypeptide complex for the folding of said polypeptide to its biologically active state; and

(c) adding an osmolyte to ~~exposing~~ said chaperonin-polypeptide complex ~~to an osmolyte~~, thereby promoting the folding of said polypeptide from its unfolded state to its folded state to yield a folded biologically active polypeptide whereby said promoting is greater than that which is achieved using chaperonins and osmolytes alone.

41. (previously presented) The method of folding a denatured polypeptide of claim 40 wherein said chaperonin is of the Escherichia coli GroE chaperonin family.
42. (previously presented) The method of folding polypeptides of claim 41 in which the chaperonin is E. coli GroEL.
43. (previously presented) The method of folding polypeptides of claim 40 in which the osmolyte is urea.
44. (previously presented) The method of folding polypeptides of claim 40 further comprising the step of promoting the folding of said polypeptide by the addition of a co-chaperonin to the chaperonin-polypeptide complex.
45. (previously presented) The method of folding polypeptides of claim 40 further comprising a step of removing a metastable polypeptide folding intermediate prior to complete folding of the polypeptide and further stabilizing said metastable polypeptide.
46. (previously presented) The method of folding polypeptides of claim 40 wherein said chaperonin is immobilized on an inert support.
47. (previously presented) The method of folding polypeptides of claim 40 wherein the concentration of said osmolyte is sufficient to reduce the aggregation of unfolded polypeptides into unusable forms.

48. (previously presented) The method of folding a denatured polypeptide of claim 40 wherein said method is conducted under controlled oxidation/reduction conditions.
49. (previously presented) The method of folding a denatured polypeptide of claim 48 in which the oxidation/reduction conditions comprise an at least substantially anaerobic environment.
50. (previously presented) The method of folding a polypeptide of claim 48 wherein said oxidation/reduction conditions are controlled by one or more redox agents selected from the group comprising glutathione, sulfhydryl and protein reduction systems.